The Value of Home-country Governance for Cross-listed Stocks

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Abstract

Governance has many dimensions - corporate governance pertains to the firm's management whilst sovereign governance pertains to the firm's exposure to sovereign risk, corruption, and poor regulation. We show that both are important drivers of firm value and this has serious implications for the increasing number of Chinese firms choosing to cross-list in the US. Whilst the legal bonding hypothesis argues that firms from poor-corporate-governance environments can signal their quality by issuing stock in the US it is silent on the role of sovereign governance. Thus, we use a sample of cross-listed firms from 48 countries between 1996 and 2008 and find that the home country's sovereign governance quality, but not its corporate governance quality (as proxied by the anti-director rights index) continue to influence the market values of cross-listed firms. Furthermore, cross-listed firms from strong governance countries that have higher market values than non-cross-listed firms or firms from weak governance countries. These results highlight the importance of distinguishing between the myriad types of governance when analyzing the bonding hypothesis and the drivers of cross-listed stocks' valuations, and emphasize the continued importance of sovereign governance for cross-listed firms.

Keywords: governance, cross-listing, firm value

JEL Codes: G15, G38, K22

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1 Introduction

In the cross-listing literature, there exists two apparently conflicting hypotheses – the bonding and the market segmentation hypotheses (Coffee, 1999; Stulz, 1999; Licht, 2003; Siegel, 2009;Miller, 1999). The bonding hypothesis argues that firms intentionally cross-list on markets that have more stringent legal and regulatory requirements than the firm's home market to limit the private benefits of control and to signal their quality. This 'bonding' effect forces the company to raise its corporate governance and disclosure levels to (at least) the bare minimum required for a foreign listing. This induces a bonding premium and hence, higher valuations.[1] On the other hand, the market segmentation hypothesis postulates that higher firm valuations from cross-listings come about as firms' costs of capital are reduced when they help investors to overcome the barriers to international investments. Accordingly, the valuation gain depends on the degree to which the cross-listed firm's home market is integrated with world capital markets. In support of this view, Miller (1999) uncovered significantly higher announcement returns for the U.S cross-listings of firms from emerging than developed markets.

The legal bonding hypothesis implies that firms can ameliorate weak-governance in the home country by cross-listing in the US to adopt US disclosure rules to signal their true quality to potential investors. The segmentation hypothesis implies that weak-governance in the home country should still harm cross-listed stocks due, inter alia to the firm's continued exposure to sovereign risk and any residual home-asset bias. We show that the 'segmented market hypothesis' and the 'bonding hypothesis' are in fact compatible because they relate to different dimensions of home-country governance. The bonding hypothesis relates specifically to shareholder protection type of 'corporate governance' traits such as shareholder protection. The segmented (or separated) market hypothesis relates to (inter alia) 'sovereign governance' traits

such as regulation, corruption, and government effectiveness. We show that cross-listing in the United States can help firms overcome a poor shareholder-governance environment. However, cross-listing does not eliminate the effect of poor sovereign-governance.

This paper considers the continued impact of home country governance quality on two levels - shareholder-governance and sovereign-governance on non-US firms that cross-list in the US. This paper examines a sample of 1334 non-US firms from 48 countries that list in the US between 1996 and 2008, for a total of 7780 firm-year observations. We also compare the set of cross-listed companies to a set of non-cross-listed companies to examine the valuation impact of cross-listing on companies from strong/weak governance countries. We measure sovereign-governance using (a) the ICRG composite risk index, (b) a rating agency's sovereign credit ratings, and (c) the World Bank's comprehensive set of time-varying country-level governance indices that include, inter alia, government accountability, political stability, the absence of corruption, enforcement of the rule of law, and the effectiveness of political institutions (Daniel et al., 2009). These traits increase corporate governance and disclosure, and encourage political development (La Porta et al., 1998, 2002). We measure shareholder-governance using the anti-director rights index (ADRI) reported in Spamann (2010).

Our key finding is that sovereign-governance but not shareholder-governance influences the US values of foreign cross-listed firms. First, we show that the ADRI does not significantly influence cross-listed firms' Tobin's Qs. Second, we find that even after controlling for selection effects, cross-listed firms in the top quartile (of the World Bank Governance Index) have Tobin's Q values that are approximately 0.25 higher than those from countries in the bottom quartile countries. Third, we find that (a) cross-listed firms from strong governance countries have higher Tobin's Q values than non-cross-listed firms from strong governance countries, and

(b) cross-listed firms from strong governance countries have higher Tobin's Qs than cross-listed firms from weak governance countries.

The main contributions of our study are four-fold: First, we highlight the importance of considering multiple aspects of home-country governance as some hypotheses, such as the bonding hypothesis, are simply not applicable to all types of governance. We show that while home-country shareholder protection does not significantly influence the valuations of cross-listed firms, home-country sovereign governance does influence valuations. Importantly, firms from strong-governance countries that cross-list have higher valuations than cross-listed firms from weak-governance countries, or non-cross-listed firms from strong governance countries. Second, by using a comprehensive set of governance indicators that reflect the time-varying dimensions of governance and which capture the impact of regulatory changes, our results suggest that home-country regulation and governance is more important to firms' cross-listed stocks in the US than has been previously reported in the literature. Moreover, we show the importance of the time-varying World Bank governance measures as opposed to legal measures proxied by indices capturing elements of shareholder protection like anti-director rights. Third, we also highlight the importance of sovereign credit risk by examining the relation between sovereign credit ratings and the valuations of cross-listed firms. This is an important contribution given the recent deteriorations in fiscal soundness for many developed countries around the world. Fourth, a collateral finding is that the Sarbanes Oxley Act (SOX) has not benefited all cross-listed firms; for firms from strong-governance countries, SOX appears to have increased costly disclosure requirements and appears to have reduced firm values.

Our analyses support three main lines of prior work that have shown there are likely to be greater benefits to listing in the US for firms based in strong regulation countries. First, the study

relates to the `bonding hypothesis'. The hypothesis is that firms from weak shareholder-rights environments can signal their quality by bonding themselves to stringent US shareholder protection laws. Doidge et al. (2004, 2009a) find empirical support for this hypothesis. They focus on the La Porta et al. (1997) anti-director rights index but do not focus on sovereign risk and governance.[2] Further, Shi et al. (2012) find that U.S. cross-listings enhance corporations' voluntary disclosures. We support this literature by showing that the anti-director rights index (ADRI) does not influence the US market values of non-US firms listed in the United States.

Second, the separated markets hypothesis implies that home-country sovereign-governance should still influence valuations. Here, geographic distances and information asymmetries make it difficult for US investors to evaluate companies outside of the US (Ahearne et al., 2004; Portes and Rey, 2005; Ragozzino and Reuer, 2011). This might be particularly so for companies domiciled in poor governance countries where there might be limited enforcement of disclosure laws. Further, non-US firms are still exposed to sovereign risks, such as the risk of expropriation. This implies that home-country sovereign-governance should influence the valuations of non-US firms that are listed in the US. There is some supportive evidence, with Gozzi et al (2010) finding that performance changes following international debt/equity issuances are largely similar to those following domestic issuances, possibly suggesting that the home market continues to influence the benefits derived from accessing international markets. Similarly, di Giovanni (2005) shows that domestic conditions can drive corporate cross-border investment. However, the prior literature has not directly tested whether sovereign governance continues to drive the valuations of cross-listed stocks.[3]

There are important implications of our research for firms striving to cross-list in US markets. For instance, the continual access to global equity financing for Chinese firms is

paramount for supporting China's economic growth and ultimately, stability in the global economy. There are many Chinese firms that intentionally cross-list in foreign markets in order to bond to high investor protection and strict disclosure regulation, access international capital markets and to enhance investor's recognition of their company and products. We reveal that firms cross-listed in the United States (US) are worth more to shareholders if they come from countries with stronger governance standards. That is, it is not the mere bonding to tighter US regulations that helps to increase shareholder wealth but the home-grown ability to support those requirements that matter. Given the increasing number of Chinese companies that are cross-listed on international stock exchanges, it is important for the Chinese government to also improve its sovereign governance to support its ongoing financial and economic development.

The reminder of this paper proceeds as follows. The next section outlines why home-country governance might influence the U.S. valuations of firms that cross-list in the U.S. Thereafter we outline the data under analysis. The empirical analyses first test the relation between governance and value. We then provide a number of robustness checks. The last section concludes that strong home-country governance remains important even for firms that list in the US.

2 Hypotheses: the importance of home-country governance

2.1 Sovereign governance

This section addresses why home-country sovereign-governance is likely to influence the valuations of firms that cross-list in the U.S. (even if firms can ameliorate the impact of poor home-country shareholder-governance). We provide four possible explanations. First, cross-listing should be less costly for firms from strong-governance countries.[4] The U.S. is typically considered to have relatively strong accounting and compliance requirements. Compliance is

costly (Doidge et al., 2009b). The costs of U.S. compliance should be lower for firms that must already comply with stringent disclosure regimes in the home country. Thus, the costs of cross-listing should be lower for firms from strong-governance countries. Lower costs could partially explain higher market values for firms from strong-governance countries. In addition, we also expect that the cross-listing firms from strong governance countries, which enjoy the benefits of both the bonding premium and the low costs of compliance, would be more valuable to shareholders than non-cross-listed firms.

Second, home-asset bias might favour companies from strong-governance countries. The literature documents a 'home-asset bias' in U.S. investors (Cooper and Kaplanis, 1994; Coval and Moskowitz, 1999; Glassman and Riddick, 2001). Three presently relevant explanations are that (1) home assets have a lower perceived riskiness (Glassman and Riddick, 2001), (2) home assets have less asymmetric information (Coval and Moskowitz, 1999), and (3) theoretical models indicate that trade should tend toward the market with lower asymmetric information and greater liquidity (Chowdhry and Nanda, 1991), which for firms from poor-governance markets would be the U.S. This should favour firms from strong-governance countries for they should have lower perceived risk and better information disclosure. Thus, to the extent that price-discovery occurs on the U.S. market,[5] firms from strong-governance countries should experience higher market values.

Third, sovereign governance can influence a firm's investment opportunities. Dharmapala and Khanna (2013) show that a firm's country determines its growth options. While it is true that large multinationals can expand overseas, such expansions are generally more costly and risky than expanding within the home country (Moeller and Schlingemann, 2005). Sovereign governance can influence growth opportunities by affecting factors such as a firm's

access to capital and the level of entrepreneurship (Cumming and Knill, 2012). Thus, we would expect the governance of the firm's home country to continue to influence its returns after it cross lists. Further, to the extent that firms within strong governance countries have a greater opportunity set, we expect that cross-listing will be more beneficial for such companies because they will have more possible investments on which to spend the money raised through cross-listing. Consistent with these expectations, McGahan and Victer (2010) find that home country factors continue to influence corporate profitability even in multinationals (although they do not specifically examine cross-listed firms).

Fourth, non-U.S. companies from weak governance regimes are still exposed to sovereign risks. This might discourage investors and drive down valuations. These companies are also subject to the impact of that weak-sovereign-governance on financing terms. Even if a firm cross-lists in the United States, it might still need to raise capital from other sources, such as from lenders. However, the sovereign legal environment affects the terms on which the firm can raise that capital. For example, Qi et al. (2011) find that covenants are less common in countries that better enforce the rule of law. Further, Hainz and Kleimeier (2012) find that political risk significantly influences the way in which firms conduct project financing. There is also prior evidence that the presence of strong laws, and the enforcement thereof, significantly influences market quality (Bhattacharya and Daouk, 2002, 2009; Bhattacharya et al., 2003), and, by implication, access to capital. The U.S. listing would not mitigate the impact of (poor) enforcement of the rule of law in the home country. This implies that firms from stronger governance countries should have higher valuations than those from weak governance countries. We hereby propose two hypotheses as follows:

Hypothesis 1: Home country governance influences the valuations of cross-listed companies - firms from strong-governance countries have higher valuations than firms from weak governance countries.

Hypothesis 2: The benefits of cross-listing are higher for firms from strong governance countries - cross-listed firms from strong governance countries have higher valuations than non-cross-listed firms and cross-listed firms from weak governance countries.

2.2 Shareholder-governance

We also argue that home-country shareholder-rights and shareholder-governance do not influence the market values of non-US firms that list in the US. This is because cross-listed firms from countries with weak investor protection simply "badge" themselves by adhering to investor protection and disclosure regulations in developed markets like the US (consistent with the "reputational bonding hypothesis"), but the quality of their financial reporting/disclosure remains lower in that home country governance doesn't support strong enforcement of increasingly demanding regulations. Therefore, shareholder rights do not make a big difference on the valuation of cross-listed firms. This is consistent with the evidence on Chinese reverse mergers which are the acquisitions of private companies made by public companies. Around 75% of the 215 Chinese firms listed in the US between 2007 and 2010 adopted a reverse merger (RM), representing 26% of all RM during that period. However, a number of Chinese RM firms have faced accusations of accounting fraud since 2010 and indeed, Chen et al. (2012) uncover lower accounting quality in Chinese RM firms than in both US RM and regular firms. Therefore, we predict that home-country shareholder rights do not influence the valuations of cross-listed companies.

3 Data and methodology

3.1 Empirical strategy

Our first set of models examines how sovereign governance influences the valuation of cross-listed companies. The sample is a firm-year panel of observations for cross-listed firms. The reason for choosing a firm-year panel, rather than examining short-term changes in Tobin's Q in the immediate years after cross-listing, is as follows: Some prior literature indicates that the main valuation-gains from cross-listing are short-term (Gozzi et al., 2008; Sarkissian and Schill, 2009). If we were to focus only on the change in Tobin's Q immediate after cross-listing, then there would be the concern that the results merely reflect a short-term bounce in Tobin's Q. Examining a firm-year panel allows us to examine Tobin's Q at any time after cross-listing, thereby ameliorating concerns about short-term increases in Tobin's Q. Our models are of the following form:

$$Q_{i,t} = \alpha + \beta \mathrm{GOV}_{i,t} + \gamma I(\mathrm{SOX})_{i,t} + \theta\left(\mathrm{GOV}_{i,t} \times I(\mathrm{SOX})_{i,t}\right) + \sum_{k=1}^{n} \psi^{(k)} \mathrm{Control}_{i,t}^{(k)} + \varepsilon_{i,t} \quad (1)$$

where, Q_{it} is firm i's Tobin's Q in year t, $\mathrm{GOV}_{i,t}$ is a measure of sovereign governance (described below) and $I(\mathrm{SOX})_{i,t}$ is an indicator that equals to one if the observation post-dates SOX and zero otherwise. We also include year dummies and cluster standard errors by firm. The baseline specification is an OLS regression specification. This controls for clustering by firm and includes year dummies. By following Doidge et al. (2004), we also use a Heckman model to control for the non-random decision to list in the United States.

The second set of models examines whether cross-listed companies benefit more (or less) from strong governance than do non-cross-listed companies. They also examine whether cross-

listing benefits firms from strong governance countries more than it does firms from weak governance countries. To do this, we expand the sample to include both cross-listed companies and non-cross-listed companies and create an indicator for whether the firm is cross-listed (as per Zhang, 2007). The models are of the following form.

$$Q_{i,t} = \alpha + \beta \mathrm{GOV}_{i,t} + \gamma I(\text{Cross-listed})_{i,t} + \theta\left(\mathrm{GOV}_{i,t} \times I(\text{Cross-listed})_{i,t}\right) + \sum_{k=1}^{n} \psi^{(k)} \mathrm{Control}_{i,t}^{(k)} + \varepsilon_{i,t} \quad (2)$$

where, $I\left(\text{Cross-listed}\right)_{i,t}$ is the indicator that equals one if the firm is cross-listed, $\mathrm{GOV}_{i,t}$ is one of the various governance variables (described below) and Q_{it} is firm i's Tobin's Q in year t. We expect a positive (significant) coefficient on the interaction term, suggesting that firms from strong-governance countries benefit more from cross-listing than do firms from weak-governance countries.

3.2 Data source

Our sample used in the test of Hypothesis 1 comprises non-US firms listed on a US exchange between 1996 and 2008. For the cross-listed firms, data on firm-values comes from CRSP/Compustat. Their firm-level accounting data comes from Compustat. We only examine cross-listed firms because we want to examine the continuing impact of sovereign governance given that a firm has decided to bond itself to the US market. There are 1,334 unique firms for a total of 7,780 firm-year observations. The sample size reduces to 5,642 observations if we require that Spamann (2010) report an anti-director rights (ADRI) value for that home-country. To test Hypothesis 2, in addition to the 5642 cross-listed companies we also obtain 56,552 non-cross-listed observations, which subsequently reduces to 48,890 in the regressions due to the

missing value of the control variables. For the non-cross-listed companies, we obtain all market-value data and corporate-level data from Compustat Global.

Data on sovereign-governance comes from the World Bank and independent data providers Political Risk Services (PRS) Group and Standard and Poors. The World Bank does not report data for 1997, 1999, and 2001. For these years, we backfill data from the previous year (consistent with Gompers et al., 2003; Masulis et al., 2007; Bebchuk et al., 2009). The sample excludes firms that lack the required CRSP return data, or Compustat company-level data. The variables come in five main categories. Table 1 provides definitions of all the variables used. The following sub-sections provide a detailed description.

-- Insert Table 1 About Here --

3.3 Valuation Variables

The measure of market value is the firm's Tobin's Q (following Lang et al., 1989; Doidge et al., 2004; Bebchuk et al., 2009). The Tobin's Q is the market value of assets divided by the book value of assets. The market value of assets is the firm's market capitalization at the end of the fiscal year plus its book value of assets less its book value of equity.

3.4 Governance Variables

The key independent variables are the set of governance variables. Our goal is to examine factors other than mere corporate law (as would be captured in the ADRI variables). Thus, we focus on measures of regulation and stability. These are from the World Bank, ICRG, and S&P and are discussed below. We also include the ADRI variable as a control (see below).

World Bank Governance Variables: We use a comprehensive set of governance variables sourced from the World Bank.[6] The World Bank measures and ranks the governance

dimensions of government's accountability, corruption, government effectiveness, political stability, regulatory effectiveness, and the rule of law. The standardized 'rank' variable ranks countries from 0 to 100 (where 100 marks good governance and 0 marks poor governance). We convert this into a percentage rank between 0 and 1 (by dividing by 100). Similar to Butler and Fauver (2006), we then compute a composite governance index (denoted 'GovIndex'), which is an equally weighted average of all six governance variables. This process induces seven governance variables: government accountability (denoted WB Accountability), corruption (WB Corruption), government effectiveness (WB Gov Effectiveness), political stability (WB Pol Stability), regulation (WB Regulation), rule of law enforcement (WB Rule of Law), and an equally weighted average of all six governance variables (WB Gov Index). In all cases, a higher number represents better quality governance. All variables are bound between 0 and 1.

S&P Sovereign Credit Ratings: We include Standard and Poor's sovereign credit rating. This rating assesses a government's ability to repay existing debt. A strong rating suggests strong macro-prudential regulation. Subsequently, there is an implicit sovereign ceiling provided by government's sovereign rating and as such, poor sovereign credit ratings may lead to high costs of borrowing for firms and hence, lower their stock performance. Furthermore, for some cross-listed firms that are of national significance, sovereign credit ratings reflect the implicit ability of their national government to provide bailouts for investors.

ICRG Variables: It is important to ensure the results are robust to alternative governance measures. An alternative source of governance data are provided by the PRS Group in their International Country Risk Guide (ICRG) risk ratings.[7] The robustness analysis focuses on the ICRG's composite index of political, financial, and economic risks and examine whether firms from strong ICRG-governance countries have higher valuations.

3.5 Shareholder-governance variables

Shareholder governance is different from sovereign governance. The shareholder governance variables capture legal protection for minority shareholders. These might be, but not necessarily, correlated with the strength of the country's regulatory regime.

We use the anti-director rights index (ADRI) to proxy for shareholder-governance. La Porta et al (1997, 1998) proposed the ADRI. Spamann (2010) updated and corrected the ADRI. We use the Spamann (2010) ADRI, denoted 'ADRI (Spamann)'. Because Spamann (2010) does not report data for all countries in the sample, the sample size in the main non-Heckman regressions reduces to 5642 observations. We considered a variety of other variables, and the main results reported below are robust.[8]

3.6 Control Variables

The models include five key firm-specific variables. First, 'IAOP' is the firm's industry adjusted operating performance. A firm's operating performance is its operating cash flow scaled by its total assets. The industry-adjusted operating performance is the firm's operating performance less the average operating performance in that year of all other companies in the firm's SIC 4-digit industry. [9] Second, 'ln(Assets) is the natural log of the firm's total assets. This addresses the finding in Moeller et al (2004) that the managers of large firms are entrenched and are more likely to make value-destroying investments (in their sample, takeovers). Third, 'DPS' is the firm's dividends per share. A high dividend payout ratio may signal that the firm has sufficient free cash to distribute to shareholders (Ravid and Sarig, 1991). This suggests a positive relation between valuations and DPS. Alternatively, it may signal a lack of profitable investment opportunities, or may merely reflect dividend smoothing policies (Gugler, 2003). This implies a negative relation between valuations and DPS. Fourth, 'Cash/Assets' is the firm's cash holding

scaled by its total assets. This addresses the possibility of Jensen (1986) and Harford (1999) type agency conflicts. These would reduce valuations. Fifth, 'Debt/Assets' is the firm's long term debt scaled by its total assets. This controls for the role of leverage in reducing Jensen (1986) type agency conflicts of free cash flow. Thus, leverage should increase valuations. Sixth, 'SOX' is an indicator that equals one if the observation post-dates the implementation of the Sarbanes Oxley Act (in 2002). We control for this due to the finding SOX imposes some additional costs upon firms and its implementation caused declines in the values of non-US companies cross-listed in the US (Zhang, 2007).

3.7 Country-based controls

We explicitly control for eight home-country variables that may determine a cross-listed firm's value. The first seven derive from the World Bank's World Development Indicators (WDI) and Global Development Finance (GDF) databases.

'Home Region Stock Return', is the equally weighted stock return for all stocks domiciled in the firm's home 'region'. [10] We refer to a home region rather than a home country in order to (a) avoid biases due to illiquidity in small markets and (b) to account for the regional cross-linkages noted in Bekaert, Harvey, and Ng (2005). 'CPI' is the CPI inflation of the firm's home market. Fama and Schwert (1977) and Campbell and Vuolteenaho (2004) find that inflation, as a proxy for economic growth, can predict stock returns. 'Trade Imbalance' is the home-country's trade-imbalance, defined as (imports-exports)/(imports+exports). This addresses the possibility that a trade imbalance might depress the home-country exchange rate (Feldstein, 2008). This might then influence the firm's operating environment and tax exposure, which in turn might influence its profitability (Dharmapala and Riedel, 2012; Dharmapala and Desai, 2011).

'FDI/GDP' is the home country's foreign direct investment (FDI) divided by its GDP. This addresses the relationship between FDI and economic development in the home country (Borensztein et al., 1998). 'Home Market Cap/GDP' is the total market capitalization of firms listed in the home-country scaled by the home country's GDP. This controls for the relationship between market development, FDI use, and access to capital. 'Home Market Turnover' is the turnover of the home-country's stock market. This controls for the possibility that a liquid home market could reduce the average cost of capital for firms domiciled in that market (following Butler et al., 2005), which might increase firm value. 'Home Cop Tax Rate' is the highest marginal corporate tax rate in the home market. High home country corporate taxes might reduce firm value if they discourage FDI (following di Giovanni, 2005). This could reduce growth. Additionally, high taxes reduce after tax profits, which in turn reduce firm value. Alternatively, countries which use taxes productively might be able to use tax income to stimulate economic growth and in turn increase valuations. Also, to the extent that high taxes might discourage international investors, listing in the US might increase the firm's access to capital and improve firm value.

3.8 Heckman Choice Variables

The Heckman model accounts for the non-random decision to cross-list in the U.S. The rationale is that the companies that cross-list could be larger, more stable, and generally more capable to comply with disclosure requirements, and thus, might be better governed in general (Huang, 2011). The Heckman model works by modeling the decision to issue equity in the United States. Thus, the sample-of-interest is the set of non-U.S. firms that issue equity in the U.S. The control sample is the set of all non-U.S. firms that issue equity in any other market in

the world. Unless otherwise mentioned, these variables date from before the firm issues equity on the stock market because they must influence the initial public offering (IPO) decision.

The choice variables are in several categories. First, we control for the Spamann (2010) ADRI index, and the value of the various governance variables at the time of the IPO. This reflects the possibility that companies from strong-governance countries are less likely to need to raise capital in the United States and are less likely to seek a certification benefit (if any) from subjecting themselves to U.S. regulations.

Second, we control for home country variables that reflect the local business environment and state of financial development including the home-region return, the home country's trade imbalance, FDI/GDP, Market Capitalization scaled by GDP, stock market turnover, and maximum corporate tax rate. Similarly to home governance variables, these address the possibility that firms in economically strong countries are less likely to need to raise capital overseas, so are less likely to list in the U.S.

Third, we control for listing-process variables including the use of a fixed-price pricing mechanism, and the use of firm-commitment underwriting. This is because the desire (or ability) to use a different listing process might influence the desire to list in the U.S. For example, if the firm wishes to use an auction pricing mechanism, rather than a book-building mechanism, it might instead seek capital in Europe rather than in the United States.

Fourth, we use firm-level variables including the natural log of assets, whether the firm is venture-capital (VC) backed, and whether the firm is a high-tech firm as defined in Loughran and Ritter (2004).[11] High-tech firms and VC backed firms might prefer to issue equity in the United States because the U.S. hosts many technologically developed corporations. Conversely, large firms might prefer U.S. listings (over home-market listings) because their large size enables

them to sustain the cost of a cross-listing and is the only means for them to raise sufficient capital for their large scale investments.

The choice variables are these that do not feature in the main (i.e. second stage) regressions and should satisfy the exclusion restriction. They include variables associated with the listing in the US and corporate variables from the time of the listing (i.e. before the second stage model). These choice variables are likely to satisfy the exclusion restriction on grounds that they are from the time of listing whereas the Tobin's Q is from well after the listing. Further, the listing-process variables should only influence the nature of the listing, and should not influence long-term valuations.

4 Results and Empirical Analysis

4.1 Univariate Tests

Table 2 contains the sample composition by year. The pattern of observations is broadly consistent with the existing literature (Karolyi, 2006). Columns 3-14 of Table 2 contain the average values of the various governance variables for each year. The table reveals a slight decline, in the average country-level governance of non-US firms over time. This may suggest an increased willingness of firms in economically strong, but legally developing, countries to list in the US, and highlights the importance of allowing governance variables to change over time (in contrast to previous studies such as Doidge et al., 2004; Chung, 2006). Table 3 provides summary statistics for Tobin`s Q and governance by countries. Cross-listings to the US from English legal origin countries tend to have higher Tobin`s Q.

-- Table 2 About Here --

-- Table 3 About Here --

Table 4 provides a comparison of the firms from poor (bottom quartile) governance countries and firms from the good (top quartile) governance countries. Column 1 contains results for all non-US firms in the sample. Column 2 focuses on firms from bad governance countries, defined as countries whose WB Gov Index score for a given year is in the bottom 25% of the sample. Column 3 examines firms from good governance countries, whose WB Gov Index score for a given year is in the top 75% of the sample. The results in Table 4 support the prediction that firms from good governance countries perform better than do those from bad governance countries. Table 4 indicates that the median Tobin's Q for firms from good governance countries is significantly higher than that for firms from poor governance countries.

-- Table 4 About Here –

Focusing on the governance variables (accountability, corruption, effectiveness, stability, regulation, law and the WB Gov Index), we note that most firms that list in the US come from relatively strong-governance countries, with the mean and median rankings typically being above 0.8. This implies that firms from especially poor governance countries tend to avoid listing in the US. Speculative reasons for this might be that such firms are smaller, less-liquid, or simply do not wish to subject themselves to stringent US regulatory standards (following Doidge et al., 2004).

The control variables differ significantly between firms from good governance and poor governance countries. All control variables (and differences therein) are significant at the 1% significance level. They show that poor governance countries tend to have higher inflation. Firms from poor governance countries also tend to be smaller (have lower total assets), pay lower dividends, and maintain less leverage. Conversely, they maintain higher cash holdings. Interestingly, they tend to have higher industry-adjusted operating performance. The cash-

holdings and dividends results are largely consistent with those reported in Pinkowitz, Stulz and Williamson (2003, 2007). This suggests that if a company is from a poor governance country, then it will list abroad only if its performance is especially strong.

Table 5 contains sample means for the Tobin's Q variable and the governance variables by whether the firm is cross-listed or not. Cross-listed firms tend to have higher Tobin's Q values and come from stronger governance countries.

-- Insert Table 5 About Here –

Table 6 contains the bivariate statistics depending on whether the firm is cross-listed or from a strong/weak governance country. The figures indicate that (a) Tobin's Q values are higher for firms from strong governance countries, (b) Tobin's Q values are higher for firms that cross-list, and (c) Tobin's Q values are higher if the cross-listed firm is from a strong-governance country, and if the firm in a strong-governance country cross-lists.

-- Insert Table 6 About Here –

4.2 Governance and the Tobin's Q of cross-listed firms

The first key empirical issue that we examine is whether firms from strong-governance countries have higher market values, controlling for other firm and country characteristics. We run equation (1) using both OLS in Table 7 and a Heckman two-stage variation in Table 8 for robustness checks to address the non-random decision to cross-list in the United States.

-- Insert Table 7 About Here –

-- Insert Table 8 About Here --

The multivariate results support the hypothesis that firms from good governance countries have higher valuations. Table 7 shows that all governance variables are significant and

positive at 1% significance. Furthermore, all have coefficients of 0.5 or greater, suggesting that a 0.1 point increase in governance yields an economically important increase of at least 0.05 in Tobin's Q. Table 8 presents the results after controlling for selection effects. The data indicate Tobin's Q is approximately 0.25 higher for firms that come from top quartile countries of the World Bank governance indices than firms that come from the bottom quartile countries, which is 11.8% higher relative to the average Tobin's Q of all non-US firms in the sample. The results are robust across all of the World Bank governance indicators and S&P Ratings. This suggests that prudent management of sovereign debt by a cross-listed firm's home government and the maintenance of good governance standards can greatly benefit firm value. This presents new evidence on the flow-through impact of governments' debt and regulatory management to individual firm valuation effects.

Note that the Spamann (2010) anti-director rights index is statistically insignificant in all of our specifications in Tables 7 and 8. This implies that home-country shareholder-governance does not (significantly) drive the value of companies that cross-list in the US. This implies that by listing in the US, non-US and binding themselves to stringent US shareholder-protection laws, non-US companies can ameliorate the effect of poor shareholder-governance in the home country. This is consistent with the bonding hypothesis.

In addition, there is some evidence that SOX harmed firms from strong-governance environments consistent with the findings of Zhang (2007). In the OLS regressions, the interaction of the governance variable and the SOX indicator is significant and negative. This implies that SOX harmed market values for firms from strong governance environment, possibly because it increased compliance costs for firms that already had to meet adequate disclosure requirements.

The control variables in Tables 8 and 9 are largely consistent with expectations. For example, there is a strong negative relation between firm-size and Tobin's Q presumably because Tobin's Q incorporates growth prospects. Growth tends to concentrate in small high-innovation firms rather than in large stable firms (following Bharadwaj et al., 1999). Cash holdings are found to increase Tobin's Q, suggesting that cash can increase market value. While this is inconsistent with the agency reason for holding cash (see Harford, 1999), it does quadrate with the value-enhancing precautionary reason for holding cash (Han and Qiu, 2007). This precautionary motive might concentrate in cross-listed or foreign firms because (a) the voluntary decision to undergo additional market scrutiny (by cross-listing in the US) suggests lower agency conflicts, and (b) cross-listed firms may have a greater need to protect against currency movements. Given that foreign currency movements are a key source of risk for international firms, this result is consistent with the finding in Bates, Kahle and Stulz (2009) that cash holdings increase with corporate risk.

4.3 Cross-listed firms versus non-cross-listed firms

We next run regression model (2) to test whether cross-listed firms benefit more from stronger sovereign governance than non-cross-listed firms. Table 9 shows that the coefficients on the interaction term '$\text{GOV}_{i,t} \times I(\text{Cross-listed})_{i,t}$' are always positive and significant in five regressions. This indicates companies cross-listing in the US from strong-governance countries have higher Tobin's Q values, implying that cross-listed firms benefit more from strong sovereign governance than do non-cross-listed firms. The finding suggests that sovereign governance remains an important determinant of firm values after cross-listing. In addition, the negative coefficients on '$\text{GOV}_{i,t}$' and the positive coefficients on '$\text{GOV}_{i,t} \times I(\text{Cross-listed})_{i,t}$' suggest that compared with other firms from strong-governance countries,

cross-listed firms have higher Tobin's Q values. In other words, firms from a strong governance country benefit from cross-listing.

- Insert Table 9 about Here -

One concern with the main results is the possible systemic difference between cross-listed and non-cross-listed firms. We address it by using propensity score models in the following way: First, we run a model to predict whether a firm is 'cross-listed' based on the control variables in the model below. Second, we obtain the propensity scores from this logit model. Third, we generate a distribution of propensity scores for the set of firms that are cross-listed and identify the score that marks the bottom 10% cut-off. Fourth, we exclude any non-cross-listed firm whose propensity score is below that cut-off. The results of propensity score matching presented in 10 are consistent with the main finding in Table 9 and reinforce our hypotheses that governance influences the gains obtained from cross-listing. Specifically, (a) cross-listed firms from strong governance countries have higher Tobin's Qs than cross-listed firms from weak governance countries, and (b) cross-listed firms from strong governance countries have higher Tobin's Qs than non-cross-listed firms.

- Insert Table 10 about Here -

Overall, our findings complement the previous literature on the benefits of cross-listings on U.S. markets but also deepen the literature in several ways. First, by considering different facets of governance at the country and minority shareholder level we manage to reconcile the legal bonding hypothesis (Coffee, 1999; Stulz, 1999) and market segmentation hypothesis (Foerster and Karolyi, 1999; Miller, 1999). Second, we account for variations in these governance dimensions over time to show that there are ongoing adverse valuation effects after

cross-listing for firms from weak governance countries. The extant literature has established a valuation gain around the cross-listing (Foerster and Karolyi, 1999; Miller, 1999) but little is known about the longer-term valuation impacts and the roles played by different governance dimensions. Third, we examine the firm valuation effects of a credit rating agency's sovereign credit ratings for cross-listed stocks and add to the literature on market segmentation that improved sovereign credit ratings help cross-listed firms to lower their costs of capital.

4.4 Additional Robustness Tests

In addition to the Heckman selection models and propensity score matching (PSM), we also perform the following robustness checks and find the results are consistent. First, we find the untabulated results hold for various forms of clustering by firm, or by 2, 3, or 4 digit SIC codes and hold with or without year dummies. The results are also not driven by the Asian financial crisis the tech-boom in the US, and robust after excluding the observations in 1997 or excluding the period between 1999-2001.Second, the results are robust to collinearity. The VIF for the variables does not exceed two, suggesting that collinearity is not a live issue in our analyses. Nonetheless, we still use principal component analysis to condense the variables into orthogonal components, which should not be collinear. The principal components analysis retains only components whose eigenvalue is at least one. This yields five components in total. Three principal components, denoted HomeComp1-Homecomp3, represent home country variables. Two principal components, denoted FirmComp1- FirmComp2, represent firm-level variables. The untabulated results are consistent in these models. We also address the concerns that the ADRI variable is highly correlated with the governance variables by dropping the ADRI variable, and find the results are consistent (untabulated). Finally, to address the concern that some firm-level control variables might be endogenous with performance, we replace the firm-

level controls with the average value for the firm's country and year by following Masulis et al. (2007), and the results remain consistent.

5 Conclusions

This paper highlights the importance of home-country sovereign-governance. The bonding hypothesis implies that firms from poor shareholder-governance countries can signal their quality by listing in the US and binding themselves to the US's strong shareholder-rules. However, it is not clear why this bonding would ameliorate poor sovereign-governance in the form of corruption, ineffective regulation, or expropriation.

We distinguish shareholder-governance with sovereign-governance and examine their impact on value of foreign stocks that list in the US. We show that home-country sovereign governance, but not shareholder-governance, drives the valuations of cross-listed stocks in the US. This supports the bonding hypothesis, and indicates that it is necessary to distinguish between the myriad aspects of regulation and governance. We also show that firms from strong governance countries gain more benefits in valuations from cross-listing than do firms from weak governance countries.

The main contribution of our study is in emphasizing the need to distinguish between the multi-dimensional aspects of sovereign and corporate governance. In doing so, we show that home-country sovereign governance influences the valuations of non-US companies that list in the US. Collateral contributions are to (a) provide additional support for the bonding hypothesis, (b) highlight the importance of using time-varying measures of governance, such as the World Bank's, ICRG's, and S&P sovereign rating measures, and (c) show that SOX imposed significant costs on non-US companies, especially those from strong governance environments.

Our study is not without its limitations. We do not examine the potential differences that firm and country level governance at home may provide for different types of stocks such as growth vs. value stocks. This is potentially interesting as better growth opportunities at the firm-level may allow some cross-listed firms to over-ride the hampering effects of poor sovereign governance and still enhance their valuations. In another direction, the effect of sovereign governance on investors' preferences on the trading location of cross-listed firms is also worth examining. Better sovereign governance at home, may increase investor demand to trade the cross-listed firm's domestic stocks, thereby enhancing the firm's market value. We leave these issues for future research.

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Table 1: Variable definitions

Variable	Definition
Dependent Variables	
Tobin' Q_t	The firm's Tobin's Q in year *t*. The Tobin's Q is the firm's market value of assets divided by its book value of assets. The market value of assets is the market capitalization at the end of year *t* plus the book assets less the book value of equity. In Compustat codes this is $(prcc\_f * csho - ceq + at)/at$
Governance Variables	
WB Accountability	A score between 0 and 1 that represents government accountability. A higher score indicates better accountability. Source: World Bank.
WB Corruption	A score between 0 and 1 that represents government corruption. A higher score indicates less corruption. Source: World Bank.
WB Gov Effectiveness	A score between 0 and 1 that represents government effectiveness. A higher score indicates greater effectiveness. Source: World Bank.
WB Pol Stability	A score between 0 and 1 that represents government stability. A higher score indicates a more stable political environment. Source: World Bank.
WB Regulation	A score between 0 and 1 that represents government regulation. A higher score indicates more effective regulatory bodies. Source: World Bank.
WB Rule of Law	A score between 0 and 1 that represents rule of law. A higher score indicates better enforcement of rule of law ideals. Source: World Bank.
WB Gov Index	The average of the six World Bank governance variables (Accountability, Corruption, Effectiveness, Stability, Regulation, RuleOfLaw)
ADRI (Spamann)	The antidirector's rights (originally from La Porta et al., 1998, and updated by Spamann, 2010)
ICRG Composite	The average ICRG composite governance index for the firm's home country over the year. Source: ICRG. This is an equal-weighted average of the individual financial, economic and political risk ratings.
ICRG Financial	The Financial stability and quality of the home country in year t as reported by the ICRG.
ICRG Economic	The Economic stability and quality of the home country in year t as reported by the ICRG.
ICRG Political	The Political stability and quality of the home country in year t as reported by the ICRG.
S&P Rating	The S&P sovereign credit ratings. S&P provides ordinal credit ratings ranging from AAA to Default/Selective Default for sovereign obligors. We first transform the ratings into a linear scale between 0 and 20 and then we convert those into a score between 0 and 1 by dividing by 20.
Control Variables	
IAOP	The industry adjusted operating performance in year t. The operating performance is the operating cash flow before depreciation (Compustat code: oibdp) divided by its total assets (Compustat code at). The industry adjusted operating performance is the operating performance less the mean operating performance for all compustat companies in that firm's industry and year.
Ln(Assets)	The natural log of the firm's total assets (Compustat code: at) in year t.
DPS	The dividends per share (Compustat code: dvpsp_f). This is the dividends paid divided by the number of shares outstanding at the end of the fiscal year.
Cash/Assets	The firm's cash (Compustat code: ch) divided by its total assets (Compustat code: at).
Leverage	The firm's leverage, defined as its total long term debt (Compustat code: dltt) divided by its total assets (Compustat code: at).
Country Level Variables	
Home Region Return	The equally weighted average stock return earned in the firm's home region. The region is the regional group of the firm's home country as defined by the

	United Nations (here: http://unstats.un.org/unsd/methods/m49/m49regin.htm)
CPI	The home country's CPI in year t as reported by the World Bank
Trade Imbalance	The home country's import-export imbalance. It is (imports - exports)/(imports + exports). Source: World Bank.
FDI/GDP	The amount of foreign direct investment in the home country scaled by the home country's GDP. Source: World Bank.
Home Market Cap/GDP	The market capitalization of all firms listed in the home market divided by the home market's GDP. Source: World Bank.
Home Market Turnover	The turnover of all stocks in the home market. Source: World Bank.
Home Corporate Tax Rate	The highest corporate tax rate for firms paying tax in the home country. Source: World Bank.
Heckman Control Variables	
ADRI (Spamann)	The Spamann (2010) Anti-director rights index (ADRI)
Governance (Yr 1)	The value of the governance variable in the year of the cross-listing. This is variously the issue-year value of 'accountability', 'corruption', 'effectiveness', 'stability', 'regulation', 'law', 'GovIndex', or 'SapRating'.
Home Market Return (Yr 1)	The equally weighted average stock return earned in the firm's home region in the year of the cross-listing. The region is the regional group of the firm's home country as defined by the United Nations (here: http://unstats.un.org/unsd/methods/m49/m49regin.htm)
High Tech Dummy	An indicator that equals one if the firm is a high-tech firm as defined in Loughran and Ritter (2002). They define a high-tech firm as one that operates in the following industries: computer hardware (SIC codes: 3571, 3572, 3575, 3577, 3578); communications equipment (3661, 3663, 3669); electronics (3671, 3672, 3674, 3675, 3677, 3678, 3679); navigation equipment (3812); measuring and controlling devices (3823, 3825, 3826, 3827, 3829); medical instruments (3841, 3845); telephone equipment (4812, 4813); communications services (4899); and software (7371, 7372, 7373, 7374, 7375, 7378, 7379)
Fixed Price IPO	An indicator that equals one if SDC reports the firm used a fixed price pricing mechanism.
VC Involvement	An indicator that equals one if the firm is backed by venture capital.
Firm Commitment IPO	An indicator that equals one if the firm uses a firm commitment underwriting mechanism.
Trade Imbalance (Yr 1)	The home country's import-export imbalance in the year of the issue. It is (imports - exports)/(imports + exports). Source: World Bank.
FDI/GDP (Yr 1)	The amount of foreign direct investment in the home country scaled by the home country's GDP in the year of the issue. Source: World Bank.
Home Market Cap/GDP (yr1)	The market capitalization of all firms listed in the home market divided by the home market's GDP in the year of the issue. Source: World Bank.
Home Market Turnover (yr1)	The turnover of all stocks in the home market in the year of the listing. Source: World Bank.
Ln(Assets) (year 1)	The natural log of the firms' assets in the year of listing as reported by SDC.
Home Corporate Tax Rate	The maximum corporate tax rate in the home country.

Table 2: Summary statistics by year

Year	Observations	Accountability	Corruption	Effectiveness	Political Stability	Regulation	Rule Of Law	WB Gov Index	S&P Rating	ICRG Composite Index	ICRG Financial Index	ICRG Economic Index	ICRG Political Index
1996	437	0.803	0.882	0.892	0.703	0.840	0.876	0.833	0.869	0.810	0.445	0.385	0.789
1997	535	0.804	0.879	0.888	0.700	0.843	0.874	0.831	0.870	0.818	0.424	0.394	0.816
1998	568	0.806	0.859	0.868	0.711	0.870	0.851	0.828	0.856	0.796	0.383	0.403	0.806
1999	590	0.805	0.858	0.866	0.709	0.866	0.848	0.825	0.851	0.783	0.384	0.392	0.791
2000	602	0.816	0.864	0.872	0.720	0.869	0.852	0.832	0.853	0.800	0.383	0.415	0.802
2001	671	0.810	0.863	0.872	0.717	0.866	0.852	0.830	0.853	0.807	0.388	0.406	0.820
2002	663	0.796	0.842	0.864	0.698	0.836	0.829	0.811	0.852	0.796	0.390	0.400	0.803
2003	657	0.801	0.849	0.868	0.659	0.839	0.830	0.807	0.856	0.804	0.404	0.400	0.805
2004	639	0.825	0.836	0.870	0.647	0.845	0.832	0.809	0.863	0.815	0.412	0.412	0.805
2005	620	0.795	0.818	0.857	0.635	0.831	0.817	0.792	0.862	0.808	0.408	0.410	0.799
2006	634	0.772	0.816	0.858	0.629	0.827	0.813	0.786	0.867	0.805	0.409	0.415	0.787
2007	585	0.742	0.786	0.840	0.615	0.813	0.789	0.764	0.862	0.805	0.409	0.420	0.782
2008	579	0.694	0.764	0.833	0.578	0.799	0.764	0.739	0.861	0.794	0.411	0.409	0.768
Total	7,780	0.790	0.839	0.865	0.670	0.842	0.832	0.806	0.859	0.803	0.403	0.405	0.798

Note: This table presents the sample composition by year for cross-listed firms in the US. Column 2 reports the number of observations. Columns 3-14 contain the average values of the various governance variables. Variables are as defined in Table 1.

Table 3: Tobin's Q and governance by country

Country Code	Country	Number	Tobin's Q	Accountability	Corruption	Effectiveness	Political Stability	Regulation	Rule Of Law	WB Gov Index	S&P Rating	ICRG Composite Index	ICRG Financial Index	ICRG Economic Index	ICRG Political Index
English Legal Origin															
AUS	AUSTRALIA	192	2.10	0.94	0.94	0.94	0.87	0.94	0.96	0.93	0.96	0.82	0.36	0.41	0.87
BLZ	BELIZE	6	0.88	0.74	0.51	0.60	0.60	0.52	0.55	0.59	0.37	.	.	.	.
CAN	CANADA	2,098	2.01	0.96	0.95	0.96	0.86	0.92	0.95	0.93	0.98	0.85	0.41	0.42	0.87
GHA	GHANA	6	1.15	0.43	0.46	0.49	0.39	0.48	0.46	0.45	.	0.60	0.29	0.28	0.64
HKG	HONG KONG	270	1.34	0.56	0.89	0.89	0.76	0.98	0.86	0.82	0.81	0.82	0.44	0.43	0.77
IND	INDIA	81	2.69	0.59	0.46	0.54	0.19	0.45	0.57	0.47	0.49	0.69	0.43	0.35	0.61
IRL	IRELAND	127	1.90	0.92	0.92	0.92	0.91	0.97	0.93	0.93	0.97	0.86	0.41	0.43	0.89
ISR	ISRAEL	838	1.76	0.68	0.83	0.84	0.14	0.82	0.79	0.68	0.71	0.70	0.39	0.39	0.62
NZL	NEW ZEALAND	42	1.60	0.99	0.99	0.94	0.97	0.97	0.98	0.97	0.95	0.80	0.33	0.40	0.88
PNG	PAPUA NEW GUINEA	5	1.99	0.45	0.18	0.24	0.25	0.24	0.17	0.26	0.30	0.64	0.38	0.34	0.56
SGP	SINGAPORE	54	1.33	0.47	0.98	0.99	0.90	0.99	0.93	0.88	1.00	0.89	0.45	0.47	0.86
ZAF	SOUTH AFRICA	109	1.82	0.72	0.69	0.77	0.33	0.63	0.57	0.62	0.57	0.71	0.38	0.36	0.69
THA	THAILAND	5	1.30	0.62	0.52	0.61	0.59	0.60	0.65	0.60	0.55	0.72	0.37	0.36	0.71
GBR	UNITED KINGDOM	783	2.10	0.89	0.96	0.95	0.73	0.98	0.94	0.91	1.00	0.82	0.39	0.39	0.86
French Legal Origin															
ARG	ARGENTINA	126	1.30	0.57	0.45	0.56	0.43	0.42	0.42	0.48	0.26	0.69	0.32	0.38	0.69
BEL	BELGIUM	21	2.32	0.92	0.91	0.93	0.81	0.88	0.90	0.89	0.95	0.82	0.40	0.43	0.82
BRA	BRAZIL	72	1.39	0.58	0.56	0.55	0.40	0.58	0.45	0.52	0.41	0.67	0.33	0.35	0.66
CHL	CHILE	217	1.44	0.76	0.89	0.86	0.68	0.92	0.87	0.83	0.72	0.78	0.38	0.40	0.78
COL	COLOMBIA	4	1.07	0.35	0.31	0.52	0.10	0.60	0.24	0.35	0.55	0.59	0.35	0.31	0.51
FRA	FRANCE	266	1.80	0.86	0.90	0.90	0.72	0.83	0.90	0.85	1.00	0.79	0.39	0.41	0.79
GRC	GREECE	84	1.26	0.77	0.67	0.74	0.62	0.76	0.74	0.72	0.73	0.74	0.34	0.37	0.77
IDN	INDONESIA	42	1.64	0.31	0.20	0.39	0.12	0.40	0.28	0.28	0.33	0.61	0.35	0.33	0.53
ITA	ITALY	136	1.49	0.79	0.72	0.78	0.67	0.77	0.74	0.75	0.88	0.80	0.40	0.40	0.80
JOR	JORDAN	3	1.41	0.39	0.59	0.58	0.40	0.66	0.63	0.54	0.40	0.73	0.38	0.37	0.71
LUX	LUXEMBOURG	83	1.69	0.95	0.95	0.97	0.98	0.98	0.97	0.97	1.00	0.91	0.43	0.45	0.93
MEX	MEXICO	256	1.47	0.51	0.45	0.62	0.33	0.66	0.39	0.49	0.53	0.72	0.38	0.36	0.70
NLD	NETHERLANDS	317	1.92	0.98	0.97	0.98	0.91	0.98	0.95	0.96	1.00	0.86	0.40	0.42	0.90
PAN	PANAMA	28	1.22	0.63	0.43	0.58	0.50	0.68	0.50	0.55	0.47	0.73	0.35	0.37	0.73
PER	PERU	29	1.90	0.45	0.50	0.46	0.20	0.63	0.31	0.42	0.44	0.69	0.38	0.37	0.63
PHL	PHILIPPINES	25	1.29	0.52	0.35	0.53	0.23	0.56	0.43	0.43	0.46	0.70	0.37	0.37	0.66
PRT	PORTUGAL	25	1.30	0.91	0.87	0.85	0.88	0.85	0.86	0.87	0.88	0.80	0.36	0.37	0.87
ESP	SPAIN	84	1.45	0.87	0.88	0.89	0.61	0.87	0.87	0.83	0.95	0.79	0.39	0.40	0.80
TUR	TURKEY	8	2.33	0.42	0.53	0.61	0.23	0.58	0.54	0.49	0.35	0.62	0.31	0.30	0.63
VEN	VENEZUELA	14	0.98	0.45	0.20	0.26	0.23	0.33	0.22	0.28	0.30	0.65	0.39	0.32	0.59
German Legal Origin															
AUT	AUSTRIA	6	1.50	0.92	0.95	0.94	0.87	0.93	0.97	0.93	1.00	0.85	0.42	0.40	0.88
DEU	GERMANY	161	1.63	0.93	0.94	0.93	0.83	0.92	0.94	0.91	1.00	.	.	.	.
JPN	JAPAN	331	1.44	0.77	0.86	0.87	0.85	0.77	0.89	0.83	0.92	0.85	0.47	0.40	0.83
CHE	SWITZERLAND	110	2.18	0.96	0.97	0.99	0.98	0.94	0.99	0.97	1.00	0.90	0.46	0.44	0.89
Scandinavian Legal Origin															
DNK	DENMARK	40	2.20	0.98	0.98	0.98	0.89	0.97	0.98	0.96	0.98	0.87	0.42	0.43	0.89
FIN	FINLAND	48	1.93	0.98	1.00	0.97	0.98	0.97	0.99	0.98	0.96	0.88	0.38	0.45	0.92
ISL	ICELAND	8	2.68	0.97	0.99	0.98	0.99	0.93	1.00	0.98	0.81	0.80	0.31	0.38	0.91
NOR	NORWAY	58	1.38	0.98	0.97	0.97	0.96	0.89	0.99	0.96	1.00	0.91	0.47	0.47	0.88
SWE	SWEDEN	105	1.95	0.98	0.99	0.98	0.97	0.92	0.97	0.97	0.96	0.85	0.37	0.43	0.89
Socialist Legal Origin															
CHN	CHINA	394	1.84	0.07	0.40	0.59	0.36	0.43	0.43	0.38	0.70	0.77	0.46	0.40	0.68
HUN	HUNGARY	11	1.73	0.85	0.74	0.79	0.76	0.84	0.75	0.79	0.66	0.75	0.36	0.35	0.80
KAZ	KAZAKHSTAN	2	1.05	0.18	0.18	0.36	0.60	0.37	0.24	0.32	0.58	.	.	.	.
POL	POLAND	2	1.20	0.82	0.70	0.73	0.59	0.71	0.70	0.71	0.63	0.75	0.38	0.35	0.77
RUS	RUSSIA	48	1.92	0.29	0.21	0.42	0.22	0.34	0.19	0.28	0.45	.	.	.	.

Table 4: Univariate statistics

	All (1)	Bad Governance (2)	Good Governance (3)	Difference (4)=(2)-(3)
Tobin's Q	1.8210***	1.7529***	1.8412***	-0.0883***
WB Accountability	0.7902***	0.4771***	0.8829***	-0.4058***
WB Corruption	0.8388***	0.5581***	0.9219***	-0.3638***
WB Gov Effectiveness	0.8647***	0.6513***	0.9279***	-0.2767***
WB Pol Stability	0.6702***	0.2916***	0.7824***	-0.4908***
WB Regulation	0.8421***	0.6043***	0.9125***	-0.3083***
WB Rule of Law	0.8317***	0.5402***	0.9181***	-0.3779***
WB Gov Index	0.8063***	0.5204***	0.8910***	-0.3705***
S&P Rating	0.8592***	0.5824***	0.9408***	-0.3584***
ICRG Composite	0.8029***	0.7143***	0.8291***	-0.1147***
ICRG Financial	0.4027***	0.3947***	0.4051***	-0.0104***
ICRG Economic	0.4052***	0.3739***	0.4144***	-0.0405***
ICRG Political	0.7982***	0.6603***	0.8388***	-0.1785***
Home Region Stock Return	0.1450***	0.2268***	0.1208***	0.1060***
Tobin's Q (t-1)	2.2537***	2.2032***	2.2686***	-0.0654***
CPI	0.0300***	0.0596***	0.0213***	0.0383***
IAOP (t-1)	0.0374***	0.0612***	0.0303***	0.0309***
Ln(Assets (t-1)	6.8582***	6.3239***	7.0165***	-0.6925***
DPS (t-1)	0.4059***	0.3128***	0.4335***	-0.1207***
Cash/Assets (t-1)	0.1374***	0.1557***	0.1319***	0.0238***
Debt/Assets (t-1)	0.1547***	0.1303***	0.1619***	-0.0316***
Trade Imbalance	-0.0261***	-0.0172***	-0.0288***	0.0116***
FDI/GDP	0.0006***	0.0003***	0.0008***	-0.0005***
Home Market Cap/GDP	0.0103***	0.0060***	0.0116***	-0.0056***
Home Market Turnover	0.7559***	0.6085***	0.7991***	-0.1906***
Home Corp Tax Rate	0.3308***	0.3346***	0.3297***	0.0049***

Note: This table reports the univariate statistics. Column 1 contains univariate statistics for the full sample of 7780 observations. Column 2 analyzes firms that cross-listed to the US from poor-governance countries. A country is a poor-governance country in year t if its WB Gov Index in year t falls within the bottom 25% of all firms in that year. Column 3 contains results for firms from good governance countries, defined as the complement of poor-governance countries. Column 4 contains the difference between Column 2 and Column 3. Variables are as defined in Table 1. *, **, *** Significant at the 10%, 5% and 1% levels, respectively.

Table 5: Difference in means test by cross-listing status

Variable	Cross-Listed	Not Cross-Listed	Difference
	[1]	[2]	[3]=[1]-[2]
Tobin's Q	1.823	1.424	0.399***
WB Accountability	0.791	0.751	0.040***
WB Corruption	0.839	0.854	-0.015***
WB Gov Effectiveness	0.865	0.875	-0.010***
WB Pol Stability	0.670	0.772	-0.103***
WB Regulation	0.841	0.833	0.008***
WB Rule of Law	0.832	0.862	-0.030***
WB Gov Index	0.806	0.825	-0.018***
ICRG Composite	0.802	0.825	-0.023***
S&P Rating	0.860	0.886	-0.026***

Note: This table contains difference in means test for the cross-listed sample and non-cross-listed sample. The superscript *** in Column 3 denotes significance at 1% in a difference in means test.

Table 6: Bivariate statistics for Tobin's Q by cross-listing status and governance

	Variable	Cross-listed	Not Cross-listed	Difference
		[1]	[2]	[3]=[1]-[2]
[A]	Strong governance	1.896***	1.374***	0.521***
[B]	Weak Governance	1.668***	1.663***	0.004
[C] = [A]- [B]	Difference	0.228***	-0.289***	0.517***

Note: This table contains statistics for Tobin's Q for firms cross-listed/non-cross-listed and/or from a strong/weak governance country. We define a strong governance country as one for which the World Bank governance index is above 0.8 and a weak governance country as one for which the governance index is below 0.8 (marking the cut-off for the bottom 25% of the sample). Superscripts ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively using a t-test, or difference in means test (as appropriate), or, for the difference-in-differences figure, a regression of the form:

$$Q_{i,t} = \alpha + \beta I\left(\text{Cross-listed}\right)_{i,t} + \gamma I(\text{Strong Governance})_{i,t} + \theta\left(I(\text{Strong Governance})_{i,t} \times I\left(\text{Cross-listed}\right)\right) + \varepsilon_{i,t}.$$

Table 7: OLS Regressions for Tobin's Q

Dependent Variable	Tobin's Q								
Technique	OLS, Year Dummies , Firm Clustering								
Governance Variable	WB Accountability	WB Corruption	WB Gov Effectiveness	WB Pol Stability	WB Regulation	WB Rule of Law	WB Gov Index	ICRG Composite	S&P Rating
ADRI (Spamann)	0.019	0.025	0.036	0.019	0.043	0.028	0.016	0.038	0.029
	[0.531]	[0.423]	[0.229]	[0.527]	[0.153]	[0.371]	[0.601]	[0.203]	[0.337]
Governance Variable	1.222***	1.096***	1.472***	0.604***	1.317***	0.958***	1.396***	2.815***	0.986***
	[0.000]	[0.002]	[0.002]	[0.000]	[0.003]	[0.002]	[0.000]	[0.000]	[0.000]
I(SOX)	0.157	0.474	0.758*	0.054	0.683*	0.371	0.481*	0.355	0.278
	[0.429]	[0.119]	[0.058]	[0.644]	[0.075]	[0.129]	[0.079]	[0.496]	[0.210]
I(SOX) x Governance Variable	-0.375	-0.709**	-1.038**	-0.260*	-0.932**	-0.589**	-0.743**	-0.894	-0.499*
	[0.129]	[0.044]	[0.025]	[0.086]	[0.035]	[0.040]	[0.026]	[0.160]	[0.054]
Region Market Return	-0.008	-0.146	-0.129	-0.109	-0.15	-0.161*	-0.059	-0.089	-0.076
	[0.938]	[0.132]	[0.188]	[0.286]	[0.117]	[0.099]	[0.556]	[0.389]	[0.439]
Tobin's Q (t-1)	0.158***	0.161***	0.160***	0.159***	0.161***	0.160***	0.160***	0.157***	0.160***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
CPI	2.120***	2.683***	2.463***	2.067***	2.441***	2.644***	2.820***	2.945***	2.804***
	[0.001]	[0.001]	[0.002]	[0.002]	[0.001]	[0.002]	[0.000]	[0.000]	[0.000]
IAOP (t-1)	0.535***	0.534***	0.534***	0.540***	0.535***	0.531***	0.538***	0.525***	0.536***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Ln(Assets) (t-1)	-0.070***	-0.071***	-0.071***	-0.080***	-0.070***	-0.071***	-0.072***	-0.082***	-0.075***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
DPS (t-1)	0.038**	0.038**	0.040**	0.046**	0.038**	0.040**	0.040**	0.052**	0.041**
	[0.044]	[0.050]	[0.041]	[0.019]	[0.050]	[0.043]	[0.039]	[0.011]	[0.032]
Cash/Assets (t-1)	0.927***	0.875***	0.876***	0.895***	0.892***	0.875***	0.891***	0.895***	0.857***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Debt/Assets (t-1)	-0.188	-0.135	-0.145	-0.158	-0.143	-0.137	-0.172	-0.157	-0.147
	[0.186]	[0.333]	[0.300]	[0.271]	[0.306]	[0.330]	[0.225]	[0.273]	[0.295]
Trade Imbalance	0.566*	0.273	0.306	0.644*	0.114	0.254	0.525*	0.852**	0.243
	[0.067]	[0.386]	[0.336]	[0.052]	[0.715]	[0.424]	[0.097]	[0.012]	[0.447]
FDI/GDP	-73.281**	-101.746**	-105.460**	-103.095***	-107.688**	-94.001**	-101.994**	-95.864**	-94.013**
	[0.038]	[0.013]	[0.011]	[0.010]	[0.014]	[0.019]	[0.010]	[0.019]	[0.016]
Home Market Cap/GDP	2.663	2.339	1.243	0.228	1.72	2.583	0.156	-2.183	1.049
	[0.459]	[0.523]	[0.736]	[0.952]	[0.647]	[0.479]	[0.966]	[0.570]	[0.778]
Home Market Turnover	0.081	0.152***	0.150***	0.146***	0.150***	0.148***	0.113**	0.131**	0.113**
	[0.127]	[0.006]	[0.006]	[0.006]	[0.007]	[0.006]	[0.040]	[0.017]	[0.042]
Home Corp Tax Rate	-0.186	0.269	0.167	0.174	0.461	0.25	0.133	0.107	0.051
	[0.565]	[0.380]	[0.587]	[0.582]	[0.143]	[0.417]	[0.669]	[0.747]	[0.873]
Constant	0.971***	0.847**	0.525	1.531***	0.518	0.984***	0.743**	-0.806	1.052***
	[0.000]	[0.011]	[0.208]	[0.000]	[0.230]	[0.001]	[0.016]	[0.113]	[0.000]
Observations	5,642	5,642	5,642	5,642	5,642	5,642	5,642	5,493	5,642
R^2	37.40%	36.80%	36.80%	36.90%	36.80%	36.80%	37.10%	37.20%	37.00%
F test	36.84	36.57	37.09	35.86	37.44	35.99	36.71	35.92	36.27

Note: This table presents OLS regression results for Tobin's Q as the dependent variable as per equation (1). The independent variables are defined in Table 1. The models include year dummy variables, and standard errors are clustered by firm. *, **, *** denote significance at the 10%, 5% and 1% levels, respectively.

Table 8: Robustness Checks: Heckman Regressions

Dependent Variable					Tobin's Q				
Governance Variable	WB Accountability	WB Corruption	WB Gov Effectiveness	WB Pol Stability	WB Regulation	WB Rule of Law	WB Gov Index	S&P Rating	ICRG Composite
I(SOX)	-0.211	0.028	0.281	-0.097	0.113	0.074	0.092	0.044	-0.122
	[0.267]	[0.888]	[0.246]	[0.443]	[0.637]	[0.693]	[0.644]	[0.812]	[0.760]
Governance Variable	0.945***	0.737***	1.001***	0.521***	0.877***	0.707***	1.037***	0.860***	2.075***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
I(SOX) x Governance Variable	0.085	-0.287	-0.587**	-0.079	-0.383	-0.341*	-0.311	-0.284	-0.052
	[0.683]	[0.170]	[0.022]	[0.518]	[0.135]	[0.080]	[0.145]	[0.121]	[0.915]
ADRI (Spamann)	0.014	0.011	0.023	0.004	0.025	0.016	0.008	0.009	0.024
	[0.536]	[0.633]	[0.319]	[0.855]	[0.278]	[0.498]	[0.722]	[0.692]	[0.311]
Region Stock Return	-0.016	-0.181	-0.171	-0.095	-0.173	-0.188	-0.08	-0.061	-0.105
	[0.897]	[0.131]	[0.155]	[0.429]	[0.150]	[0.116]	[0.509]	[0.622]	[0.383]
Tobin’s Q (t-1)	2.287***	2.274***	2.080***	2.200***	2.169***	2.289***	2.630***	2.935***	2.988***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
IAOP (t-1)	0.173**	0.166**	0.164**	0.174**	0.167**	0.162**	0.172**	0.173**	0.142*
	[0.019]	[0.025]	[0.026]	[0.018]	[0.024]	[0.028]	[0.020]	[0.020]	[0.059]
Ln(Assets) (t-1)	-0.071***	-0.074***	-0.075***	-0.083***	-0.073***	-0.075***	-0.074***	-0.079***	-0.080***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
DPS (t-1)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	[0.850]	[0.828]	[0.806]	[0.718]	[0.830]	[0.812]	[0.815]	[0.799]	[0.710]
Cash/Assets (t-1)	1.952***	1.918***	1.923***	1.906***	1.932***	1.918***	1.923***	1.896***	1.955***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Debt/Assets (t-1)	-0.175*	-0.14	-0.150*	-0.170*	-0.137	-0.144	-0.170*	-0.132	-0.138
	[0.053]	[0.123]	[0.100]	[0.061]	[0.132]	[0.113]	[0.060]	[0.152]	[0.130]
Trade Imbalance	0.178	-0.157	-0.116	0.26	-0.299	-0.158	0.102	-0.137	0.226
	[0.494]	[0.541]	[0.653]	[0.338]	[0.230]	[0.536]	[0.696]	[0.597]	[0.421]
FDI/GDP	-54.635	-80.328**	-83.077**	-81.256**	-84.954**	-73.655**	-81.008**	-80.405**	-82.370**
	[0.115]	[0.021]	[0.017]	[0.020]	[0.015]	[0.033]	[0.020]	[0.022]	[0.019]
Home Market Cap/GDP	15.667***	16.006***	14.930***	15.140***	15.848***	16.278***	13.786***	15.436***	12.999***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Home market Turnover	0.088**	0.169***	0.171***	0.154***	0.169***	0.161***	0.124***	0.138***	0.155***
	[0.049]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.006]	[0.003]	[0.001]
Home Corp Tax Rate	0.428	0.755***	0.640**	0.644**	0.904***	0.711***	0.648**	0.577**	0.588**
	[0.124]	[0.005]	[0.018]	[0.017]	[0.001]	[0.008]	[0.017]	[0.038]	[0.035]
High Tech Dummy	0.235***	0.188***	0.185***	0.227***	0.195***	0.184***	0.206***	0.205***	0.223***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Constant	0.534***	0.533**	0.315	0.971***	0.298	0.573***	0.417**	0.556***	-0.419
	[0.005]	[0.011]	[0.195]	[0.000]	[0.243]	[0.005]	[0.043]	[0.003]	[0.269]
Selection Regression									
I(SOX)	-0.183***	-0.200***	-0.197***	-0.212***	-0.201***	-0.198***	-0.194***	-0.175***	-0.191***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
ADRI (Spamann)	-0.350***	-0.347***	-0.344***	-0.278***	-0.350***	-0.337***	-0.335***	-0.330***	-0.319***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Governance Variable (Year 1)	-0.544***	-0.003	-0.254**	-1.299***	-0.246**	-0.484***	-0.819***	-1.128***	-2.869***
	[0.000]	[0.977]	[0.037]	[0.000]	[0.046]	[0.000]	[0.000]	[0.000]	[0.000]
Region Return (Year 1)	0.135**	0.170***	0.160***	0.051	0.153***	0.146***	0.119**	0.136***	0.119**
	[0.011]	[0.002]	[0.003]	[0.337]	[0.005]	[0.006]	[0.025]	[0.010]	[0.026]

High Tech	0.529***	0.546***	0.546***	0.490***	0.545***	0.545***	0.535***	0.531***	0.525***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Fixed Price IPO	-2.070***	-2.019***	-2.028***	-2.132***	-2.028***	-2.044***	-2.070***	-2.041***	-2.025***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
VC Involvement	0.675***	0.720***	0.708***	0.566***	0.710***	0.686***	0.661***	0.634***	0.670***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Firm Commitment	-0.716***	-0.723***	-0.722***	-0.700***	-0.723***	-0.719***	-0.717***	-0.729***	-0.737***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Trade Imbalance (Year 1)	-1.212***	-0.924***	-1.000***	-2.568***	-0.914***	-1.092***	-1.303***	-1.516***	-1.856***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
FDI/GDP (Year 1)	248.058***	268.059***	263.821***	250.692***	267.572***	253.467***	251.765***	237.456***	259.682***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
MKTCAP/GDP (Year 1)	-0.422	-3.389	-1.166	10.649***	-1.123	0.831	3.894	7.603***	4.901*
	[0.873]	[0.230]	[0.683]	[0.000]	[0.697]	[0.763]	[0.158]	[0.005]	[0.078]
Home Turnover (Year 1)	-0.338***	-0.415***	-0.400***	-0.277***	-0.399***	-0.382***	-0.346***	-0.310***	-0.315***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
ln(Assets) (Year 1)	0.285***	0.288***	0.287***	0.283***	0.288***	0.286***	0.285***	0.282***	0.288***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Tax Rate	5.027***	4.770***	4.832***	5.051***	4.724***	4.867***	4.933***	5.364***	5.165***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Constant	-1.177***	-1.526***	-1.352***	-1.019***	-1.309***	-1.200***	-0.993***	-0.914***	0.435*
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.065]
lambda	0.135***	0.146***	0.144***	0.131***	0.147***	0.140***	0.137***	0.138***	0.133***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Observations	35,516	35,516	35,516	35,516	35,516	35,516	35,516	35,391	34,561
Wald Stat	1230.95	1180.04	1180.27	1219.52	1182.27	1179.37	1203.2	1149.98	1192.93
Rho	0.14	0.15	0.14	0.13	0.15	0.14	0.14	0.14	0.13

Note: This table presents Heckman regression results for Tobin's Q as the dependent variable in the second step, and the decision to cross-list is in the first step. The key independent variables reflect different dimensions of governance. The models include year dummy variables and standard errors are clustered by firm. Variables are as defined in Table 1. *, **, *** denote significance at the 10%, 5% and 1% levels, respectively.

Table 9: Governance and Benefits of Cross-listing

Dependent Variable	Tobin's Q								
Technique	OLS, Year Dummies , Firm Clustering								
Governance Variable	WB Accountability	WB Corruption	WB Gov Effectiveness	WB Pol Stability	WB Regulation	WB Rule of Law	WB Gov Index	ICRG Composite	S&P Rating
ADRI (Spamann)	0.019	0.005	0.008	0.008	0.005	0.011	0.004	0.001	0.005
	[0.223]	[0.732]	[0.605]	[0.585]	[0.732]	[0.488]	[0.812]	[0.943]	[0.731]
Governance Variable	0.387***	-0.152	-0.514***	-0.391***	-0.074	-0.316***	-0.154	-2.054***	-0.345***
	[0.000]	[0.173]	[0.001]	[0.000]	[0.431]	[0.009]	[0.158]	[0.000]	[0.008]
Governance x I(Cross-listed)	0.168	0.562	0.926*	0.490***	0.386	0.468*	0.536	2.521***	0.656**
	[0.484]	[0.125]	[0.052]	[0.003]	[0.288]	[0.073]	[0.115]	[0.003]	[0.026]
I(Cross-listed)	-0.227	-0.563*	-0.894**	-0.449***	-0.409	-0.481**	-0.524*	-2.159***	-0.663**
	[0.253]	[0.078]	[0.035]	[0.000]	[0.198]	[0.033]	[0.067]	[0.002]	[0.013]
Region Market Return	0.332***	0.253***	0.204***	0.203***	0.259***	0.223***	0.253***	0.156***	0.240***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.002]	[0.000]
Tobin's Q (t-1)	0.537***	0.538***	0.537***	0.537***	0.538***	0.537***	0.538***	0.535***	0.535***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
CPI	0.000***	0	0	-0.000**	0	0	0	-0.000***	-0.000*
	[0.001]	[0.700]	[0.114]	[0.017]	[0.795]	[0.120]	[0.666]	[0.000]	[0.068]
IAOP (t-1)	-0.013***	-0.013***	-0.014***	-0.014***	-0.013***	-0.013***	-0.013***	-0.014***	-0.014***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Ln(Assets) (t-1)	0.004	-0.003	-0.007	-0.003	-0.003	-0.005	-0.003	-0.006	-0.007
	[0.540]	[0.657]	[0.332]	[0.701]	[0.708]	[0.519]	[0.664]	[0.424]	[0.322]
DPS (t-1)	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.001]	[0.000]
Cash/Assets (t-1)	0.610***	0.583***	0.572***	0.599***	0.582***	0.584***	0.587***	0.601***	0.574***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Debt/Assets (t-1)	0.015***	0.015***	0.015***	0.015***	0.015***	0.015***	0.015***	0.015***	0.015***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Trade Imbalance	0.390**	0.418**	0.291	0.113	0.435***	0.360**	0.422**	-0.213	0.419***
	[0.023]	[0.013]	[0.108]	[0.539]	[0.009]	[0.037]	[0.012]	[0.352]	[0.008]
FDI/GDP	-9.917	-25.168	-25.242	-17.298	-24.859	-25.413	-26.371*	-18.282	-25.855
	[0.544]	[0.122]	[0.116]	[0.293]	[0.127]	[0.114]	[0.100]	[0.271]	[0.108]
Home Market Cap/GDP	-5.939***	-4.508**	-3.327*	-3.114*	-4.656**	-3.807**	-4.547**	-2.08	-4.167**
	[0.002]	[0.016]	[0.067]	[0.074]	[0.013]	[0.034]	[0.014]	[0.222]	[0.022]
Home Market Turnover	-0.049**	-0.004	0.003	0.005	-0.005	0.008	-0.004	0.014	0.009
	[0.035]	[0.854]	[0.884]	[0.795]	[0.809]	[0.683]	[0.847]	[0.509]	[0.673]
Home Corp Tax Rate	-1.613***	-1.496***	-1.518***	-1.424***	-1.476***	-1.512***	-1.481***	-1.460***	-1.495***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Constant	0.652***	1.100***	1.430***	1.192***	1.022***	1.217***	1.100***	2.621***	1.492***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Observations	54,514	54,514	54,514	54,514	54,514	54,514	54,514	54,365	54,461
R^2	45.70%	45.60%	45.70%	45.70%	45.60%	45.60%	45.60%	45.80%	45.70%
F test	403.04	348.23	336.08	346.24	352.01	343.38	349.55	336.42	337.29

Note: This table contains regressions that expand the sample to include non-cross-listed companies. The regressions compare the Tobin's Q of cross-listed companies versus that of non-cross-listed companies. The indicator I(Cross-listed) equals one if the firm is cross-listed. Variables are defined in Table 1. Brackets contain p-values and superscripts ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively.

Table 10: Robustness checks: Propensity score regressions

Dependent Variable	Tobin's Q								
Technique	OLS, Year Dummies , Firm Clustering								
Governance Variable	WB Accountability	WB Corruption	WB Gov Effectiveness	WB Pol Stability	WB Regulation	WB Rule of Law	WB Gov Index	ICRG Composite	S&P Rating
ADRI (Spamann)	0.052	0.075**	0.065*	0.079**	0.066**	0.080**	0.067*	0.059*	0.054
	[0.115]	[0.037]	[0.053]	[0.034]	[0.049]	[0.029]	[0.059]	[0.063]	[0.102]
Governance Variable	-0.97	-2.359*	-3.653**	-1.745**	-3.148**	-2.723**	-2.771**	-4.880*	-2.237*
	[0.296]	[0.060]	[0.016]	[0.049]	[0.031]	[0.032]	[0.045]	[0.093]	[0.059]
Governance x I(Cross-listed)	1.502	2.248*	3.508**	1.726**	3.061**	2.572**	2.769**	5.373*	2.447**
	[0.108]	[0.066]	[0.019]	[0.048]	[0.035]	[0.039]	[0.040]	[0.059]	[0.041]
I(Cross-listed)	-1.586**	-2.234**	-3.388**	-1.690**	-2.895**	-2.547**	-2.631**	-4.829**	-2.492**
	[0.034]	[0.034]	[0.011]	[0.018]	[0.019]	[0.020]	[0.021]	[0.044]	[0.020]
Region Market Return	-0.222	-0.411**	-0.459***	-0.390**	-0.482***	-0.463***	-0.423**	-0.325**	-0.371**
	[0.180]	[0.016]	[0.007]	[0.016]	[0.004]	[0.005]	[0.014]	[0.047]	[0.031]
Tobin's Q (t-1)	0.257***	0.256***	0.253***	0.255***	0.254***	0.255***	0.255***	0.255***	0.255***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
CPI	0.001***	0.001***	0.001***	0.001**	0.002***	0.001***	0.001***	0.001***	0.001***
	[0.001]	[0.005]	[0.000]	[0.014]	[0.000]	[0.009]	[0.002]	[0.001]	[0.006]
IAOP (t-1)	0.502*	0.493*	0.491*	0.483*	0.494*	0.493*	0.495*	0.480*	0.490*
	[0.058]	[0.063]	[0.060]	[0.070]	[0.059]	[0.061]	[0.060]	[0.074]	[0.064]
Ln(Assets) (t-1)	-0.096***	-0.108***	-0.110***	-0.100***	-0.113***	-0.107***	-0.106***	-0.103***	-0.104***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
DPS (t-1)	0.261***	0.279***	0.265***	0.257***	0.282***	0.264***	0.266***	0.264***	0.262***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Cash/Assets (t-1)	0.841***	0.849***	0.846***	0.837***	0.823***	0.863***	0.850***	0.832***	0.841***
	[0.002]	[0.001]	[0.002]	[0.002]	[0.002]	[0.001]	[0.002]	[0.003]	[0.002]
Debt/Assets (t-1)	-0.118	-0.042	-0.039	-0.07	-0.051	-0.042	-0.046	-0.077	-0.07
	[0.375]	[0.744]	[0.766]	[0.594]	[0.693]	[0.747]	[0.725]	[0.558]	[0.586]
Trade Imbalance	-0.678	-1.260**	-1.458**	-1.321**	-1.106*	-1.340**	-1.346**	-1.249**	-1.208**
	[0.211]	[0.025]	[0.013]	[0.017]	[0.052]	[0.018]	[0.019]	[0.030]	[0.034]
FDI/GDP	-165.306***	-142.386***	-145.604***	-143.900***	-155.734***	-152.092***	-155.042***	-155.845***	-158.652***
	[0.000]	[0.002]	[0.001]	[0.002]	[0.001]	[0.001]	[0.001]	[0.001]	[0.001]
Home Market Cap/GDP	2.097	6.868	7.626	5.067	7.928	7.021	5.67	3.026	3.994
	[0.722]	[0.251]	[0.225]	[0.396]	[0.188]	[0.239]	[0.350]	[0.634]	[0.506]
Home Market Turnover	-0.023	0.137*	0.164**	0.104	0.143*	0.151**	0.129*	0.097	0.08
	[0.786]	[0.070]	[0.028]	[0.158]	[0.059]	[0.043]	[0.091]	[0.223]	[0.297]
Home Corp Tax Rate	-0.499	-0.363	-0.452	-0.267	-0.518	-0.34	-0.409	-0.413	-0.493
	[0.238]	[0.387]	[0.278]	[0.530]	[0.218]	[0.414]	[0.329]	[0.335]	[0.248]
Constant	2.795***	3.714***	4.965***	3.027***	4.510***	4.021***	4.081***	5.324**	3.928***
	[0.000]	[0.001]	[0.000]	[0.000]	[0.001]	[0.000]	[0.001]	[0.028]	[0.001]
Observations	6,513	6,513	6,513	6,513	6,513	6,513	6,513	6,391	6,513
R^2	37.50%	37.90%	38.00%	37.80%	37.90%	38.00%	37.90%	37.60%	37.80%
F test	41.39	39.58	39.65	39.47	39.83	39.6	39.87	40.34	39.75

Note: This table contains regressions that restrict the sample of non-cross-listed firms by using a propensity score approach. First, we run a model to predict whether a firm is 'cross-listed' based on the control variables in the model below. Second, we obtain the propensity scores from this logit model. Third, we generate a distribution of propensity scores for the set of firms that are cross-listed and find the score that marks the bottom 10% cut-off. Fourth, we exclude any non-cross-listed firm whose propensity score is below that cut-off. The reported models are OLS models that include year dummies and cluster standard errors by firm. Brackets contain p-values and superscripts ***, **, and * denote significance at 1%, 5%, and 10% levels, respectively.

[1] Roosenboom and van Dijk (2009) also show that bonding creates value for firms choosing to cross-list on the London Stock Exchange.
[2] Doidge et al. (2004) do examine 'common law' versus 'civil law' countries; however, this does not capture the strength of the country's regulatory environment and it is not clear that there is a bright-line distinction between common law and civil law countries.
[3] We note that Chung (2006) does examine some measures of home-country governance, but uses time-invariant measures dated from before the Asian Financial Crisis, does not update the variables for the financial crisis, and does not control for firm or country characteristics.
[4] We acknowledge the argument that the SEC may not fully enforce disclosure (Licht, 2003). However, (1) the SEC appears relatively more efficient than the regulators in poor governance countries (Chen et al., 2005), and (2) even absent the SEC, shareholder class actions can be an effective disciplinary mechanism.
[5] The location of trade and price-discovery is a live issue (Halling et al., 2008; Cumming et al., 2011). However, it is clear that at least some price-discovery occurs in the U.S. (Halling et al., 2008).
[6] The data are available from http://info.worldbank.org/governance/wgi/index.asp
[7] The ICRG publishes a composite index that measures, for each month, a country's financial, economic and political risks. This paper uses the yearly average of the ICRG composite index. Papers using the ICRG governance measures include Erb, Harvey, and Viskanta (1996) and Bekaert et al. (2007) , among others.
[8] The main results vis-à-vis the governance variables hold whether or not we require the Spamann (2010) variable. They also hold if we replace it with the original ADRI score used in La Porta et al. (1997, 1998) or the Djankov et al. (2008) shareholder rights index.
[9] The results are robust to other measures of operating performance (return on assets, return on equity) and to subtracting the industry-median performance rather than the industry mean performance. The results are also robust to the use of SIC 2-digit or SIC 3-digit industry classifications. Also, the results are robust to the definition of dividends per share, holding when using the dividends per share at the end of the last calendar year, and when defining the number of shares as either the number of common shares outstanding or the fully diluted number of shares outstanding.
[10] The paper adopts the United Nations geographic region definitions, available from: http://unstats.un.org/unsd/methods/m49/m49regin.htm
[11] Loughran and Ritter (2004) define high tech firms as firms in the industries: computer hardware (SIC codes: 3571, 3572, 3575, 3577, 3578); communications equipment (3661, 3663, 3669); electronics (3671, 3672, 3674, 3675, 3677, 3678, 3679); navigation equipment (3812); measuring and controlling devices (3823, 3825, 3826, 3827, 3829); medical instruments (3841, 3845); telephone equipment (4812, 4813); communications services (4899); and software (7371, 7372, 7373, 7374, 7375, 7378, 7379).

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